

Contrastive Analysis and Error Analysis

A General Overview

An Optional Subject

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Background

Points To Consider

1. **Applied linguistics** (AL) is the branch of linguistics concerned with using linguistic theory to address real-world problems. It has been traditionally dominated by the fields of language education and **Second Language Acquisition** (SLA). There is a recurrent tension between those who regard the field as limited to the study of language learning, and those who see it as encompassing all applications of linguistic theory.
2. AL grew out of linguistics → it is self-evident that when trying to understand SLA, it was looked at the language first.
3. The field of SLA was developed from the study of second language teaching, and includes the study of the learning setting, learner variables, the nature of the target language and the learner native language, and the reasons for language learning. Much of SLA research to date focuses on one or another of these dimensions (linguistic, social psychological, or cognitive) rather than being multidimensional.
4. Language acquisition is the process by which the language capability develops in a human.
5. **First language** (L1) acquisition concerns with the development of language in children
6. **Second language** (L2) acquisition focuses on language development in adults as well. Historically, theories and theorists may have emphasized either nature or nurture as the most important explanatory factor for acquisition.
7. **Behaviorism** → Language acquisition as habit formation → old habits of L1 may be helpful in learning L2

8. CA is based on the theoretical assumptions of **behaviorism**. If L2 acquisition is disturbed by the habits of your native language, it is reasonable to focus on the differences between native and target language. In the US, contrastive analysis had a practical goal: If you recognize the differences between your native language and the target language, you are able to overcome the linguistic habits of your native language that interfere with the habits of the target language.

Stimulus → Cognitive system → Response

Learning is a process of habit formation. Learning involves:

- (i). imitation
- (ii). practice
- (iii). reinforcement

9. It was only in the 70s and 80s when the focus was shifted to the learner

10. Learners' Errors and Error Correction in Language Teaching

11. It is to S.P. Corder that Error Analysis (EA) owes its place as a scientific method in linguistics. As Rod Ellis cites, "it was not until the 1970s that EA became a recognized part of AL, a development that owed much to the work of Corder". Before Corder, linguists observed learners' errors, divided them into categories, tried to see which ones were common and which were not, but not much attention was drawn to their role in SLA. It was Corder who showed to whom information about errors would be helpful (teachers, researchers, and students) and how.

Contrastive Analysis (CA)

Points To Consider

1. Definition of CA: CA is the study and comparison of two languages, learners' Target Language (TL) and learners' Native Language (NL). In other words, It is the systematic study of a pair of languages with a view to identifying their structural differences and similarities.
2. The Systematic comparison of L1 and L2 structures is done in order to predict difficulties.
3. In the 1940s to 1960s before the SLA field as we know it was established, Charles Fries (1945:9) wrote: "The most efficient materials are those that are based upon a scientific description of the language to be learned, carefully compared with a parallel description of the native language of the learner."
4. Serious studies into CA began with Robert Lado's 1957 book, "Linguistics Across Culture." Its central tenets and other observations on second language acquisition became increasingly influential in CA the 1960s and 70s. It built upon ideas set out in linguistic relativity, also known as the Sapir-Whorf Hypothesis, which believed that language structures affect cognitive thinking. This led to the automatic transferring of one language's rules to another.

5. The theoretical foundations for what became known as the Contrastive Analysis Hypothesis were formulated in Lado's *Linguistics Across Cultures* (1957). In this book, Lado claimed that "*those elements which are similar to [the learner's] native language will be simple for him, and those elements that are different will be difficult*".
6. CA is founded on the assumption that second/foreign language (L2) learners tend to transfer into the target language features found in their native (L1) language.
7. Individuals tend to transfer the forms and meanings, and the distribution of forms and meanings of their native language and culture to the foreign language and culture (Lado: 1957).
8. The transfer may be positive or negative. Transfer is said to be positive when a familiar skill facilitates the learning of a new structure. When the patterns are similar, the acquisition of the new pattern is facilitated, but when there are differences in patterns, these differences hinder the learning of the foreign language.
9. James (1980) states that contrastive studies have four main applications: predicting errors in L2, error diagnosis, testing the learners, and in course design, i.e. what to teach (selection) and when to teach it (grading). If such decisions were to be based solely on teacher's experience, they would lose their objectivity. Linguistic analysis constitutes much more reliable ground for generalizations.

Mainstream of CA

Points To Consider

1. The bulk of the SLA field was concerned, however, with prediction of errors.
2. **The simplistic model:** The most simplistic version was the belief that linguistic differences based simply on similarities and differences alone could be used to predict learning difficulties. Thus, the following quote:
3. **A simplistic prediction:** "Where two languages were similar, **positive transfer** would occur; where they were different, **negative transfer**, or **interference**, would result."

CA and SLA

Points To Consider

1. CA was used extensively in the field of SLA in the 1960s and early 1970s, as a method of explaining why some features of a Target Language (TL) were more difficult to acquire than others.
2. According to the behaviorist theories prevailing at the time, language learning was a question of habit formation, and this could be reinforced or impeded by existing habits. Therefore, the difficulty in mastering

certain structures in L2 depended on the difference between the learners' L1 and the language they were trying to learn.

CA in the Classroom

Points To Consider

1. Pointing out similarities and differences between L1 and L2
2. Basis for planning courses and designing materials

Contrastive Analysis Hypothesis (= CAH)

Points To Consider

1. **CAH** - This extension of the notion of CA attributed the ability to predict errors to a CA of two languages, a predictability that practitioners associated with the degree of similarity between the two systems.
2. **Advantages of CAH** (i) Explains pronunciation and phonological interference (ii.) Enhancing language learner awareness: which elements they can transfer from L1.
3. **Problems for the CAH version** However, the CAH version of CA, that is, the predictive version ran into some problems:
 - (i). **Association with behaviorism:**
-1959 Noam Chomsky's classic review of Skinner's Verbal Behavior, in which Chomsky seriously challenged the behaviorist view of language. CAH, intimately associated with behaviorism, got caught in this discrediting of this view of language.
 - (ii). **Mispredictions:**
Specifically, the supposed ability of CAH to predict errors was not supported by the facts.
 1. it **underpredicted**, that is, it failed to predict some errors;
 2. it **overpredicted**, that is, it predicted some errors that failed to occur;
 3. of course, it also got some right
4. **Why?**
 - (i). As Long and Sato (1984) pointed out, one cannot depend upon the analysis of a linguistic product to yield meaningful insight into a psycholinguistic process.
 - (ii) **In accordance with Psycholinguistics** (Osgood 1953) "When two sets of materials to be learned are quite different or are easily discriminated by the learner, there is relatively little interaction, that is, learning one has little effect upon learning the other. If they are similar in such a way that the learning of one serves as partial learning of the other, there may be facilitation, or positive transfer. If, however, the similarities either of stimuli or responses are such that responses interfere with one another, then there will be greater interference as similarity increases."
5. **Note** CAH failed, not CA

6. The failure discussed thus far is the failure of **CAH**, not the failure of **CA**.

Strong vs. weak versions of CA

Points To Consider

1. Wardhaugh (1970) proposed a distinction between the strong and the weak version of the CA.
2. The strong version [CAH] predicts apriori ((predictive)).
3. The weak version deals with learner errors and uses CA, when applicable, to explain them, apostriori, that is, after the fact.

In fact, this was the **beginning of error analysis**, that is, the detecting of the source of errors.

Criticism of CA

Points To Consider

1. The process of L2 acquisition is not sufficiently described by the characterization of errors
2. Errors in L2 acquisition do not only arise from interference
3. The structural differences between two languages are not sufficient to predict the occurrence of errors in L2 acquisition.
4. In its strongest formulation, the CAH claimed that all the errors made in learning L2 could be attributed to 'interference' by the L1. However, this claim could not be continued by empirical evidence that was accumulated in the mid- and late 1970s. It was soon pointed out that many errors predicted by CA were inexplicably not observed in learners' language.
5. Even more confusingly, some uniform errors were made by learners irrespective of their L1. It thus became clear that CA could not predict learning difficulties, and was only useful in the retrospective explanation of errors. These developments, along with the decline of the behaviorist and structuralist paradigms considerably weakened the appeal of CA.

Error Analysis (EA)

Points To Consider

1. Learners' L1 influences L2 learning. Of course, CA survived. No one can deny that the L1 influences L2 performance. Thus, the next approach was to limit the analysis to the examination of errors that students actually made. This, however, had its problems.
2. EA Focuses on the errors L2 → learners produced while using L2 → Interlanguage is the starting point of analysis
3. Investigating cross-linguistic influence, language transfer (from the point of view of errors)
4. Pit Corder (1967) The significance of learner's errors.

- (i) L2 acquisition should not be looked at from a purely pedagogical perspective.
 - (ii) Errors in L2 are interesting because they reflect underlying linguistic rules.
 - (iii) The study of L2 can be seen as a subfield of general linguistics or cognitive science.
5. Mistake: random slip in performance → self-correction possible
 6. Error: systematic deviation from the norm caused by underlying competence problem → self-correction not possible
 7. The mathematical analysis done to show quantitatively how uncertainties in data produce uncertainty in calculated results, and to find the sizes of the uncertainty in the results.
 8. A type of work sample analysis in which the incorrect responses of the student are described and categorized. In this procedure, samples of learner's language are collected and the errors are identified, described, and classified according to their hypothesized causes. The errors are then evaluated for relative seriousness.
 9. The analysis of the errors could serve as basis for inferring the learning strategies the learners employ.
 10. Below is a list of categories of errors which reflect the general characteristics of rule learning (Richards: 1970):
 - (i) **Overgeneralization.** This occurs when the learners apply a particular rule of the Target Language (TL) that they have previously learned. What the learners create are deviant structures on the basis of their experience of other structures in the TL. Usually, the deviant structures formed involve redundancy or redundancy reduction.
 - (ii) **Ignorance of rule restrictions.** Closely related to the generalization of structures is the failure to observe the restrictions of existing structures, that is, the application of rules to contexts where they do not apply. Some morphosyntactic errors revealed the learner's failure to observe the conditions operating in certain grammatical categories of the TL.
 - (iii) **Incomplete application of rules.** This refers to the learner's failure to apply the operational components of the TL. This might cause the learner to produce deviant sentences associated with subject-verb agreement, subordinate clauses, and others.
 - (iv) **False concepts hypothesized.** This happens when a learner falsely comprehend the distinctions of the various categories of the TL. The learner fails to comprehend subtle differences in the use of certain categories of the TL.

- (v) **Negative transfer.** Some linguistic errors are attributed to the use of some grammatical categories or structures of the native or source language in the second language performance.
- (vi) **Lexical error.** These are errors dealing with the meaning and use of words in relation to their context or linguistic situations. Lexical errors may be attributed to the learner's having limited lexicon of the TL or that lexical items have not yet been taught or learner might not have learned them yet.

Contrastive Analysis Vs. Error Analysis

Contrastive analysis	Error analysis
Pedagogical orientation	Scientific orientation
Focus on input, practice inductive learning	Focus on linguistic and cognitive processes
Errors of transfer	Multiple types of errors

Classification of Errors

1. Surface classification (Dulay, Burt, C Krashen, 1982; Ellis, 1997)

Omission	The dog sleeping.
Addition	She does not likes chocolate.
Misinformation	He goed home.
Disordering	I do not know what should I do.

2. Linguistic classification (Dulay, Burt, C Krashen, 1982; Ellis, 1997)

Phonological error	'rikəmend (for recommend)
Lexical error	This restaurant sells excellent cancer.
Morphological error	He explained it brief.
Syntactic error	You have to pay the twenty five per cent the price.

Language acquisition as rule formation

Points To Consider

1. Under the influence of Chomsky's theory of language acquisition, researchers began studying the speech of children learning English as their L1. They attempted to use these to write a grammar of what the children were producing.
2. **What is Chomsky's theory on children's language acquisitions about?** Noam Chomsky believes that children are born with an inherited ability to learn any human language. He claims that certain linguistic structures which children use so accurately must be already imprinted on the child's mind. Chomsky believes that every child has a 'language acquisition device' or LAD which encodes the major principles of a

language and its grammatical structures into the child's brain. Every language is extremely complex, often with subtle distinctions which even native speakers are unaware of. However, all children, regardless of their intellectual ability, become fluent in their native language within five or six years.

3. So-called "rule formation":

*She doesn't wants to go.

*I eated it.

*geeses

*wented

Notice that such forms cannot be the product of imitation.

4. 'Developmental' Errors: SLA researchers found that in SLs the learners committed similar 'developmental' errors, errors that were not apparently due to L1 interference.

5. Interlingual versus intralingual Errors (Richards 1971)

(i). Errors found to be traceable to L1 interference were termed interlingual. CA was used to explain them.

(ii.) A large number of similar errors, however, were found to be committed by SL learners regardless of their L1. These were termed intralingual errors.

Sources of errors (Brown, 1981; Richards, 1974)

Interlingual (negative transfer = interference)	Use of elements from one language while speaking another language	The teacher wrote it on the *table.
Intralingual	Overgeneralization of rules, simplification	two *advices
Developmental	Errors that also occur in L1 learning	"The chairs are being *bringed in."
Induced errors	Teacher induced errors	Imitating the mispronunciation of a word
Unique errors	Neither interference nor Developmental	

Mistakes vs. Errors

Points To Consider

Corder distinguished between mistakes and errors.

1. Mistakes were 'misfires', slips, that is, the type of random mistakes we all make.
2. Errors were systematic errors in the student performance reflecting incomplete mastery of some aspect of the language.

Interlingual Errors:

Points To Consider

1. Interference

Example

1. I student.
2. My name Abdullah.

This constructions may possibly be influenced by Learners L1 – (Yemeni) Arabic.

Intralingual Errors:

Points To Consider

These were analyzed to see what sort of strategies were being used.

1. Overgeneralization
2. Simplification
3. Communication based
4. Induced errors

Overgeneralization

*Last week Jim didn't know where is Bill living.

*Shirley doesn't know what is the dog doing.

The speaker has perhaps overgeneralized the pattern for subject-auxiliary inversion and applied it to the so-called embedded question. Note that this is a statement, not a question.

Simplification

*I studied English for two year.

The omission of the plural marker following the noun *year* could be termed simplification; note that no information is lost. The cardinal number already signals plurality.

Communication-based

The learner uses 'airball' for 'balloon' (word coinage from Tarone, 1980)

The learner incorrectly labels the object (perhaps knowingly), but successfully communicates a desired concept.

Induced errors

*She cried as if a baby cries. (Stenson 1974)

The teacher had given 'like' for the meaning of 'as if' without explaining how the grammar has to be different for 'as if'. E.g.,
She cried as if she were a baby and
She cried like a baby cries.

Criticism of EA

Points To Consider

According to Schachter and Celce-Murcia (1977)

1. Focused only on errors
2. Did not deal with **avoidance** (relative clauses: Chinese and Japanese vs. Spanish and Farsi English passive avoidance by Arabic speakers phrasal verbs by Hebrew speakers)
3. In short, EA did not deal with what the students were doing that caused them to succeed, that is, it did not deal with what led to learning.